

**DENVER MUSEUM OF NATURE AND SCIENCE
VENUS WINDS PROJECT
MEETING AGENDA**

Date/Time/Location 29 Jan 2015, 6:00 PM **ONLINE**

SPECIAL NOTICE

This Agenda is for a completely online meeting of the Venus Winds Project. We encourage you to make every effort to participate in this meeting. It will allow us to evaluate this option when (1) appropriate meeting space is unavailable at the Museum, (2) severe weather precludes attendance at the Museum, or (3) the Principal Investigators are located out of state.

We plan to use the electronic meeting space provided by Michael Doubek. Just point your browser to: <https://bluejeans.com/597553819/#> and join the meeting! If you don't have a computer, please dial into the conference line: (866) 588-1857 Access code: 4015711. If either of these change before the meeting, we'll give you an update.

AGENDA ITEMS CARRIED FORWARD

Your results Mark

The assignment was to select 9 sharp images from the Dec 14, 2010 dataset, approximately equally spaced in time. We have seven results of this assignment so far. The goal is to start reviewing these selected images next meeting.

Summary of velocity data from July 12, 2004 images Mark

Spreadsheets with wind velocities have been filled out by eight researchers so far. Summaries of these results will be posted on Google Docs soon, with a discussion postponed until the next meeting.

Wind velocity measurements using pre-defined points Mark

Since last meeting, Mark sent an Excel workbook containing three spreadsheets: 1. **(Input)** This spreadsheet is similar to a previous exercise in which nine target points were to be tracked on nine evenly-spaced images from the July 12, 2004 series; 2. **(Calculations)** Display of nine graphs each of E-W distance (km) vs. Time (sec) and nine graphs N-S distance (km) vs. Time (sec) and 3. **(Results)** East to West Wind Speed (m/s) vs. Latitude and South to North Wind Speed (m/s) vs. Latitude graphs

Individual sub-group task reports

Sub-group *Slit Removal* (Proposer: Dylan)

Dylan and Mark discussed potential algorithms to automate slit removal from the images. Dylan will build upon existing program code.

Sub-group *Improved Online Tools* (Proposer: Ricardo)

Ricardo and an associate have been improving the coordinate recording tool that Ricardo demonstrated at an earlier meeting (November 6). The tool is available for testing at <http://venuswindsproject.org/>. Report your experience and any problems to Ricardo. Ricardo also suggested an improved method of rapidly examining a series of images for a specific dataset.

Sub-group *Plotting Rotation Curves* (Proposer: Christy)

Christy has agreed to calculate velocity vs. latitude speeds for a solid sphere rotator. She will plot the velocities of points at several latitudes on the surface of a sphere. There will be one curve for an equatorial velocity of 50 m/s, one for an equatorial velocity of 75 m/s, and one for an equatorial velocity of 100 m/s.

Sub-group *Automated Co-Registration* (Proposer: Dave)

Dave has been researching available applications employing auto-correlation algorithms that would be employed in automated co-registration of images. He is planning to continue this research.

Upcoming Assignment: Co-Register Images All researchers

Mark discussed the new assignment, which is to take each of your 9 images from Dec 14, 2010 and move Venus so that it is in the center of the 512x512 image. Please bring these new, shifted images with you to our next meeting on January 29, 2015.

Using GIMP for co-registering images Mark

Mark will discuss using GIMP to work through Art's Tutorial #10

NEW AGENDA ITEMS

Project Web Sites Preview Marta

Marta has designed two models of a new website for the project to replace the functions of the defunct Venus wiki. You are invited to preview each at spaceodyssey.dmns.org, the *GALAXY GUIDE PORTAL*. The two models are VWP I and VWP II, links on the top stripe. Take a look at each. We'll collect your responses in a week or two to guide Marta.